

# PATENT COOPERATION TREATY

TRANSLATION

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

Date of mailing (day/month/year)	See form PCT/ISA/210
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Applicant's or agent's file reference

**PCT 8871**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/DE2005/000219**

International filing date (day/month/year)

**05.02.2005**

Priority date (day/month/year)

**09.03.2004**

International Patent Classification (IPC) or both national classification and IPC

**B60L13/04, H01F27/32**

Applicant

**THYSSENKRUPP TRANSRAPID GMBH**

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-12	YES
	Claims		NO
Inventive step (IS)	Claims	2-12	YES
	Claims	1	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations:

1. Reference is made to the following documents:

D1: DE 24 42 388 A (HOFFER) 18 March 1976 (1976-03-18)

D2: JP 06 290933 A (HITACHI CABLE LTD) 18 October 1994 (1994-10-18)

2. INDEPENDENT CLAIM 1

2.1. The present application does not satisfy the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step within the meaning of PCT Article 33(3).

2.2. Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (the references in parentheses are to D1):  
a magnetic pole for magnetic levitation vehicles with a core and a winding applied to said core, characterized in that said winding has at least two discs that are formed from conduction bands wound in several layers around the core and in that the individual layers are electrically insulated radially from one another by the first insulation

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
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layers and axially from the core and the discs by at least one second insulation layer (figure 5, cooling channel) (page 12, figures 4-6).

2.3. The subject matter of claim 1 thus differs from the known magnetic pole in that the conduction bands are wound around the core in the opposite winding direction and are electrically connected to each other on the core by a coupler.

2.4. The problem to be solved by the present invention can thus be seen as that of electrically connecting the two discs together in a simple way.

2.5. The solution to this problem as proposed in claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

Document D2 describes the same features as the present application with respect to the feature "opposite winding direction". A person skilled in the art would therefore consider the incorporation of this feature into the magnetic pole described in D1 to be a conventional design measure in solving the problem of interest.

3. DEPENDENT CLAIMS 2-12

The combinations of features contained in dependent claims 2-12 are neither known from nor suggested by the available prior art.